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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,157	03/12/2004	Joseph A. Appleton	BING-1-1082	9535
25315	7590	11/21/2005	EXAMINER	
BLACK LOWE & GRAHAM, PLLC			AGRAWAL, CHRISTOPHER K	
701 FIFTH AVENUE			ART UNIT	
SUITE 4800			PAPER NUMBER	
SEATTLE, WA 98104			3726	

DATE MAILED: 11/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/799,157	APPLETON ET AL.	
	Examiner	Art Unit	
	Christopher K. Agrawal	3726	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 14-20 and 24-35 is/are rejected.
- 7) ☒ Claim(s) 11-13 and 21-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/23/04</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 2, 7, 8, 14, 17, 18, 24, 25, 27, 28, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Groves et. al. (U.S. Patent No. 6,485,247).**

3. Claim 1: Groves et. al. teach an engine loader and transport assembly **10** adapted to engage an aircraft engine assembly **14**, comprising: a motorized drive assembly **16** engageable with a floor surface; an engagement unit **26** positioned proximate the drive assembly and partially surrounding a working space, the engagement unit including a pair of coupling assemblies **28** positioned on opposing lateral sides of the working space that are adapted to be selectively coupleable to the aircraft engine assembly when the aircraft engine assembly is positioned at least partially within the working space; and a lifting assembly **22** operatively coupled to the drive assembly and to the engagement unit and adapted to selectively raise and lower the engagement unit with respect to the floor surface (**Col. 3 line 55 – Col. 4 line 12**).

4. Claim 2: Groves et. al. also teach the assembly of claim 1 wherein the drive assembly includes an electric motor and at least one drive wheel operatively coupled to the electric motor (**Col. 9 lines 15-22**).

5. Claim 7: Groves et. al. also teach the assembly of claim 1 wherein the coupling assemblies are adapted to be selectively coupled to and decoupled from an engine buck 12 of the aircraft engine assembly (**Figs. 3 and 4; Col. 4 lines 3-12**).

6. Claim 8: Groves et. al. also teach the assembly of claim 1 wherein at least one coupling assembly of the engagement unit includes a pair of engagement members spaced apart along a respective one the opposing lateral sides of the working space, the engagement members being adapted to be selectively coupleable to at least one of a rail and a beam of an engine support of the aircraft engine assembly (**Figs. 3 and 4; Col. 4 lines 3-12**).

7. Claim 14: Groves et. al. teach a facility for performing at least one of manufacturing and servicing an aircraft comprising: a floor surface; and an engine handling assembly 10 adapted to engage an aircraft engine assembly 14, the engine handling assembly including: a motorized drive assembly 16 engageable with the floor surface; an engagement unit positioned proximate the drive assembly and partially surrounding a working space, the engagement unit 26 including a pair of coupling assemblies 28 positioned on opposing lateral sides of the working space that are selectively coupleable to the aircraft engine assembly when the aircraft engine assembly is positioned at least partially within the working space; and a lifting assembly 22 operatively coupled to the drive assembly and to the engagement unit and adapted to selectively raise and lower the engagement unit with respect to the floor surface (**Col. 3 line 55 – Col. 4 line 12**).

8. Claim 17: Groves et. al. also teach the facility of claim 14 wherein the coupling assemblies are adapted to be selectively coupled to and decoupled from an engine buck **12** of the aircraft engine assembly (**Figs. 3 and 4; Col. 4 lines 3-12**).

9. Claim 18: Groves et. al. also teach the facility of claim 14 wherein at least one coupling assembly of the engagement unit includes a pair of engagement members spaced apart along a respective one the opposing lateral sides of the working space, the engagement members being adapted to be selectively coupleable to at least one of a rail and a beam of an engine support of the aircraft engine assembly (**Figs. 3 and 4; Col. 4 lines 3-12**).

10. Claim 24: Groves et. al. teach a method of attaching an aircraft engine, comprising: positioning an airframe of the aircraft on a floor surface; providing an aircraft engine assembly **14**; providing an engine handling assembly **10** having a motorized drive assembly **16** and an engagement unit **26** operatively coupled to the motorized drive assembly, the drive assembly and the engagement unit being adapted to partially surround a working space, the engagement unit including a pair of coupling assemblies **28** positioned on opposing lateral sides of the working space; positioning the engine handling assembly proximate the aircraft engine assembly with the aircraft engine assembly at least partially positioned in the working space (**Col. 3 lines 62-66**); coupling the coupling assemblies of the engagement unit with the aircraft engine assembly (**Col. 4 lines 3-6**); raising the aircraft engine assembly by spacing apart the engagement unit from the drive assembly (**Col. 4 lines 13-25**); moving the aircraft

engine assembly into position proximate the airframe using the drive assembly; and coupling the aircraft engine assembly to the airframe (**Col. 9 lines 9-60**).

11. **Claim 25:** Groves et. al. also teach the method of claim 24 wherein coupling the coupling assemblies of the engagement unit with the aircraft engine assembly includes coupling the coupling assemblies with an engine buck **12** of the aircraft engine assembly (**Figs. 3 and 4; Col. 4 lines 3-12**).

12. **Claim 27:** Groves et. al. also teach the assembly of claim 24 wherein at least one coupling assembly of the engagement unit includes a pair of engagement members spaced apart along a respective one the opposing lateral sides of the working space, the engagement members being adapted to be selectively coupleable to at least one of a rail and a beam of an engine support of the aircraft engine assembly (**Figs. 3 and 4; Col. 4 lines 3-12**).

13. **Claim 28:** Groves et. al. also teach the method of claim 24 wherein raising the aircraft engine assembly by spacing apart the engagement unit from the drive assembly includes actuating a lifting assembly **22** operatively coupled to the engagement unit and to the drive assembly (**Col. 3 line 66 – Col. 4 line 10**).

14. **Claim 30:** Groves et. al. also teach the method of claim 24 further comprising, after coupling the aircraft engine assembly to the airframe, decoupling the engagement unit from the aircraft engine assembly (**Col 9 lines 56-60**).

15. **Claim 31:** Groves et. al. also teach the method of claim 24 further comprising, after coupling the aircraft engine assembly to the airframe, removing an engine buck from the aircraft engine assembly (**Col. 4 lines 7-12**).

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. **Claims 3, 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et. al. (U.S. Patent No. 6,485,247).**

18. Claim 3: Groves et. al. teach the assembly of claim 2 as described above but fail to specifically teach the assembly wherein the drive assembly further includes a programmable controller operatively coupled to at least one of the electric motor and the drive wheel.

19. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated programmable control with the drive assembly of Groves et. al. because it has been held that mere automation of a process or method is well within the skill of one in the art and does not constitute a patentably non-obvious improvement.

20. Claim 4: Groves et. al. teach the assembly of claim 1 as described above but fail to specifically teach the assembly wherein the engagement unit comprises a substantially U-shaped engagement assembly.

21. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated a substantially U-shaped engagement assembly in the

assembly of Groves because selection of a shape is merely a matter of design choice. It would have been well within the skill of one in the art to have provided an engagement assembly having any desired shape such as, for example, a square, rectangle, T-shape, U-shape, oval or polygon.

22. Claim 15: Groves et. al. teach the facility of claim 14 as described but fail to specifically teach the facility wherein the engagement unit comprises a substantially U-shaped engagement assembly.

23. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated a substantially U-shaped engagement assembly in the assembly of Groves because selection of a shape is merely a matter of design choice. It would have been well within the skill of one in the art to have provided an engagement assembly having any desired shape such as, for example, a square, rectangle, T-shape, U-shape, oval or polygon.

24. **Claims 5, 6, 16 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et. al. (U.S. Patent No. 6,485,247) in view of Gesuale (U.S. Patent No. 6,019,565).**

25. Claim 5: Groves et. al. teach the assembly of claim 1 as described above but do not specifically teach the assembly wherein at least one coupling assembly of the engagement unit includes a pair of elongated members, the elongated members being spaced apart along a respective one the opposing lateral sides of the working space and being adapted to be selectively extendable into and retractable from the working space.



26. Gesuale teaches an assembly wherein at least one coupling assembly of the engagement unit includes a pair of elongated members **18**, the elongated members being spaced apart along a respective one of the opposing lateral sides of the working space and being adapted to be selectively extendable into and retractable from the working space (**Fig. 1; Col. 5 lines 27-40**) for the purpose of moving bulk material objects in a less expensive yet more efficient manner than by a forklift.

27. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the elongated members of Gesuale with the assembly of Groves et. al. for the purpose of moving bulk material objects in a less expensive yet more efficient manner than by a forklift.

28. Claim 6: Groves et. al. also fail to specifically teach the assembly wherein the elongated members are substantially similar in size and shape to a pair of lifting forks of a forklift.

29. Gesuale teaches an assembly wherein the elongated members are substantially similar in size and shape to a pair of lifting forks of a forklift (**Col. 4 lines 28-30**).

30. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the elongated members of Gesuale with the assembly of Groves et. al. for the purpose of moving bulk material objects in a less expensive yet more efficient manner than by a forklift.

31. Claim 16: Groves et. al. teach the facility of claim 14 as described above but do not specifically teach the facility wherein at least one coupling assembly of the engagement unit includes a pair of elongated members, the elongated members being

spaced apart along a respective one the opposing lateral sides of the working space and being adapted to be selectively extendable into and retractable from the working space.

32. Gesuale teaches an assembly wherein at least one coupling assembly of the engagement unit includes a pair of elongated members **18**, the elongated members being spaced apart along a respective one of the opposing lateral sides of the working space and being adapted to be selectively extendable into and retractable from the working space (**Fig. 1; Col. 5 lines 27-40**) for the purpose of moving bulk material objects in a less expensive yet more efficient manner than by a forklift.

33. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the elongated members of Gesuale with the facility of Groves et. al. for the purpose of moving bulk material objects in a less expensive yet more efficient manner than by a forklift.

34. Claim 26: Groves et. al. teach the method of claim 24 as described above but do not specifically teach the method wherein coupling the coupling assemblies of the engagement unit with the aircraft engine assembly includes extending a pair of elongated members into engagement with a pair of corresponding slots disposed within the aircraft engine assembly.

35. Gesuale teaches the method wherein coupling the coupling assemblies of the engagement unit with the bulk object includes extending a pair of elongated members into engagement with a pair of corresponding slots disposed within the bulk object (**Fig.**

**1; Col. 4 lines 28-30; Col. 5 lines 27-40)** for the purpose of efficient standardized manipulation of preferably apertured objects.

36. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the elongated member coupling method of Gesuale with the method of Groves et. al. for the purpose of efficient standardized manipulation of preferably apertured objects.

37. **Claims 9, 10, 19, 20 and 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et. al. (U.S. Patent No. 6,485,247) in view of Ross (U.S. Patent No. 4,690,606).**

38. Claim 9: Groves et. al. teach the assembly of claim 1 but fail to specifically teach the assembly wherein the lifting assembly includes a pair of scissor-lift devices operatively positioned on opposing lateral sides of the working space.

39. Ross teaches a loading assembly wherein the lifting assembly includes a pair of scissor-lift devices **14** operatively positioned on opposing lateral sides of the working space for the purpose of providing efficient lifting force to the engagement unit.

40. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the scissor-lift devices of Ross in the assembly of Groves for the purpose of providing efficient lifting force to the engagement unit.

41. Claim 10: Groves et. al. teach the assembly of claim 1 but fail to specifically teach the assembly wherein the engagement unit includes an upper deck positioned proximate the aircraft engine assembly and adapted to support at least one person.

42. Ross teaches a loading assembly wherein the engagement unit includes an upper deck **11** positioned proximate the aircraft engine assembly and adapted to support at least one person for the purpose of providing access to the load.

43. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the upper deck of Ross in the assembly of Groves for the purpose of providing access to the load.

44. Claim 19: Groves et. al. teach the facility of claim 14 but fail to specifically teach the facility wherein the lifting assembly includes a pair of scissor-lift devices operatively positioned on opposing lateral sides of the working space.

45. Ross teaches a loading assembly wherein the lifting assembly includes a pair of scissor-lift devices **14** operatively positioned on opposing lateral sides of the working space for the purpose of providing efficient lifting force to the engagement unit.

46. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the scissor-lift devices of Ross in the facility of Groves for the purpose of providing efficient lifting force to the engagement unit.

47. Claim 20: Groves et. al. teach the facility of claim 14 but fail to specifically teach the facility wherein the engagement unit includes an upper deck positioned proximate the aircraft engine assembly and adapted to support at least one person.

48. Ross teaches a loading assembly wherein the engagement unit includes an upper deck **11** positioned proximate the aircraft engine assembly and adapted to support at least one person for the purpose of providing access to the load.

49. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the upper deck of Ross in the facility of Groves for the purpose of providing access to the load.

50. Claim 29: Groves et. al. teach the method of claim 24 but fail to specifically teach the method wherein actuating the lifting assembly includes actuating a pair of scissor-lift devices.

51. Ross teaches a loading assembly wherein the lifting assembly includes a pair of scissor-lift devices **14** operatively positioned on opposing lateral sides of the working space for the purpose of providing efficient lifting force to the engagement unit.

52. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the scissor-lift devices of Ross in the method of Groves for the purpose of providing efficient lifting force to the engagement unit.

**53. Claims 32, 33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et. al. (U.S. Patent No. 6,485,247) in view of applicant's admitted prior art.**

54. Claim 32: Groves et. al. teach a method of manipulating an engine assembly of an aircraft, comprising: positioning the aircraft on a floor surface; providing an engine handling system **10** having a motorized drive assembly **16** and the engagement unit **26** operatively coupled to the motorized drive assembly, the drive assembly and the engagement unit being adapted to partially surround a working space, the engagement unit including a pair of coupling assemblies **28** positioned on opposing lateral sides of the working space; positioning the engine handling assembly proximate the engine

assembly (**Col. 9 lines 9-60**); raising the engagement unit of the engine handling assembly with respect to the drive assembly such that the engine assembly is at least partially positioned in the working space (**Col. 3 line 55 – Col. 4 line 12**); coupling the coupling assemblies of the engagement unit with the engine assembly (**Figs. 3 and 4; Col. 4 lines 3-12**); attaching/detaching the engine assembly from the aircraft; and lowering/raising the engine assembly by moving the engagement unit toward/away from the drive assembly but does not specifically teach the method of performing service on the engine assembly (**Col. 3 line 55 – Col. 4 line 12**).

55. Applicant's admitted prior art discloses the use of loader apparatuses for performing service on the engine assembly.

56. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the method of Groves et. al. for the purpose of performing service on an engine assembly given the well-known need for an apparatus capable of manipulating an engine and given the need for periodic engine maintenance.

57. Claim 33: Groves et. al. also teaches the method wherein coupling the coupling assemblies of the engagement unit with the aircraft engine assembly includes coupling the coupling assemblies with an engine buck **12** of the aircraft engine assembly (**Figs. 3 and 4; Col. 4 lines 3-12**).

58. Claim 35: Groves et. al. also teaches the method wherein at least one coupling assembly of the engagement unit includes a pair of engagement members spaced apart along a respective one the opposing lateral sides of the working space, the engagement

members being adapted to be selectively coupleable to at least one of a rail and a beam of an engine support of the aircraft engine assembly (**Figs. 3 and 4; Col. 4 lines 3-12**).

**59. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et. al./Applicant's Admitted Prior Art as applied to claim 32 above, and further in view of Gesuale (U.S. Patent No. 6,019,565).**

60. Groves et. al./applicant's admitted prior art teach claim 32 as described above but fail to teach the method wherein coupling the coupling assemblies of the engagement unit with the aircraft engine assembly includes extending a pair of elongated members into engagement with a pair of corresponding slots disposed within the aircraft engine assembly.

61. Gesuale teaches the method wherein coupling the coupling assemblies of the engagement unit with the bulk object includes extending a pair of elongated members into engagement with a pair of corresponding slots disposed within the bulk object (**Fig. 1; Col. 4 lines 28-30; Col. 5 lines 27-40**) for the purpose of efficient standardized manipulation of preferably apertured objects.

62. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the elongated member coupling method of Gesuale with the method of Groves et. al./applicant's admitted prior art for the purpose of efficient standardized manipulation of preferably apertured objects.

***Allowable Subject Matter***

63. Claims 11-13 and 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

64. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,461,455 teaches an aircraft engine lifting and positioning apparatus.

U.S. Patent No. 5,722,512 teaches a jet aircraft engine shipping stand.

U.S. Patent No. 4,440,265 teaches a hydro-pneumatic positioner for removal/or installation of wing engines of aircrafts and the like.

U.S. Patent No. 5,575,607 teaches a jet engine transport vehicle lift system and a build cell.

U.S. Patent No. 4,082,195 teaches a handling system for heavy loads.

U.S. Patent No. 4,522,548 teaches an aerial weapons handling trailer.

U.S. Patent No. 2,931,519 teaches an aircraft component dolly.

U.S. Patent No. 4,412,774 teaches an apparatus for the installation of a jet engine in an aircraft compartment.

U.S. Patent No. 4,447,186 teaches an aircraft loading adapter for use with ordnance lift vehicle.



U.S. Patent No. 4,660,796 teaches a turbo-machine transport frame.


U.S. Patent No. 4,412,774 teaches an apparatus for the installation of a jet engine in an aircraft compartment.

65. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher K. Agrawal whose telephone number is (571) 272-3578. The examiner can normally be reached on Mon-Fri 8AM-4:30PM.

66. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Jimenez can be reached on (571)272-4530. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

67. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CKA

  
MARC JIMENEZ  
PRIMARY EXAMINER  
11/17/05